Amended Claims

1. **(currently amended)** A method of determining enzyme activity, the method comprising:

contacting a compound selected from the group consisting of enzymes, enzyme fragments and abzymes with a ~~labeled~~ substrate **having a label** to form a differentially-charged product;

selectively coupling either the substrate or the differentially-charged product to an ion-exchange resin thereby substantially separating the amount of substrate from the differentially-charged product; and

detecting and quantitating the label to determine ~~the amount of~~ **how much** substrate **is** remaining or **how much** differentially-charged product **is** formed, wherein the steps of coupling and detecting are performed sequentially without removing the substrate or product that is not coupled to the resin.

2. **(currently amended)** A method of determining enzyme activity, the method comprising:

contacting a compound selected from the group consisting of enzymes, enzyme fragments and abzymes with a ~~labeled~~ substrate **having a label** thereby effecting the ~~conversion~~ **converting** of the substrate to a differentially-charged product;

stopping the conversion before all of the substrate present has been converted to the differentially-charged product;

selectively coupling either the substrate or the differentially-charged product to an ion-exchange resin thereby substantially separating the substrate from the differentially-charged product in a single step; and

detecting and quantitating the label to determine ~~the amount of~~ **how much** substrate **is** remaining or **how much** differentially-charged product **is** formed;

wherein the steps of coupling and detecting are performed sequentially without removing the substrate or product that is not coupled to the resin.

3. **(original)** The method of claim 1 or 2 wherein the product is bound to the resin.

4. **(original)** The method of claim 1 or 2 wherein the substrate is bound to the resin.

5. **(original)** The method of claim 1 or 2 wherein the product or substrate measured is coupled to the resin.

6. **(original)** The method of claim 1 or 2 wherein the product or substrate measured is in solution.

7. **(previously presented)** The method of claim 1 or 2 wherein the enzyme is selected from the group consisting of a kinase, a transferase and a synthase.

8. **(original)** The method of claim 1 or 2 wherein said method is conducted in a multiple-well format.

9. **(original)** The method of claim 8 wherein the format comprises at least about 96 wells.

Claim 10. (canceled)

11. **(previously presented)** The method of claim 1 or 2 wherein said method is conducted in a microchip.

12. **(previously presented)** The method of claim 1 or 2 wherein said enzyme is selected from the group consisting of glutamine fructose-6-phosphate amidotransferase (GFAT), Nitric Oxide Synthase, Methionine Aminopeptidase, Asparagine Synthetase (Asn Syn), PFK, p38 kinase, I-kappa kinase 1, I-kappa kinase 2, TBK1, MAPKAP 2, galactosyl transferase (GTase), O-n-acetylglucosamine transferase (OGTase), and Cyclooxygenase.

13. **(currently amended)** A method for identifying a molecule, compound, or composition that affects the activity of an enzyme, the method comprising:

contacting the enzyme with a test sample comprising a molecule, compound, or composition;

contacting the enzyme with a ~~**labeled**~~ substrate **having a label** to form a differentially-charged product;

selectively coupling either the substrate or the differentially-charged product to an ion-exchange resin thereby substantially separating the substrate from the differentially-charged product;

detecting and quantitating the label to determine ~~**the amount of**~~ **how much** substrate **is** remaining or **how much** differentially-charged product **is** formed; and

comparing the amount of substrate remaining or differentially-charged product formed with a control, wherein the steps of coupling and detecting are performed sequentially without removing the substrate or product that is not coupled to the resin.

14. **(previously presented)** The method of claim 13 wherein said enzyme is selected from the group consisting of glutamine fructose-6-phosphate amidotransferase (GFAT), Nitric Oxide Synthase, Methionine Aminopeptidase, Asparagine Synthetase (Asn Syn), PFK, p38 kinase, I-kappa kinase 1, I-kappa kinase 2, TBK1, MAPKAP 2, galactosyl transferase (GTase), O-n-acetylglucosamine transferase (OGTase), and Cyclooxygenase.

15. **(previously presented)** The method of claim 13 wherein the control is an isozyme and the method is used to identify a compound or composition that preferentially or specifically affects an enzyme over its isozyme.

Claims 16-26. (canceled)